

No. 10,000

IN THE
United States Circuit Court of Appeals
FOR THE NINTH CIRCUIT

RUDOLPH LENSCH and PAUL LEDER,

Appellants,

vs.

METALLIZING COMPANY OF AMERICA, a corporation,
L. E. KUNKLER, CHARLES BOYDEN and JOSEPH GOSS-
NER,

Appellees.

APPELLANTS' OPENING BRIEF.

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Jurisdiction.

The suit arises under the Patent Laws of the United States of which the District Court has exclusive original jurisdiction (Sec. 41 and 371, Title 28, U. S. C. A.). On January 13, 1939, appellants filed their complaint [Tr. 1] in the District Court of the United States for the Southern District of California, Central Division, alleging infringement of claims 2, 3 and 4 of Letters Patent No. 2,096,166, granted October 19, 1937, to plaintiffs for a metal spray gun, and praying for an injunction and accounting. On February 28, 1939, the defendants, appellees here (except Gossner, who was not served), filed their answer [Tr. 10] in the usual form denying infringement and attacking

the validity of the patent. On July 9, 1941 the District Court entered its judgment [Tr. 45] for the defendants, adjudging and decreeing that plaintiffs' patent No. 2,096,119 as to the claims in suit was valid but not infringed, and dismissing plaintiffs' complaint with prejudice and costs to defendants. Notice of appeal was duly filed October 8, 1941 [Tr. 47].

The appellant Paul Leder appears on the face of the patent as a German citizen, but has since become a naturalized citizen of the United States. Unless proof of such fact becomes for some unforeseen reason necessary, we rest the point with counsel's statement. We hereafter refer to appellants and appellees as plaintiffs and defendants, respectively, omitting Gossner from further consideration.

Statement of the Case.

On the issues framed by these pleadings, the case was tried before the late Hon. William P. James, and after his death was by stipulation and order transferred to Hon. Ralph E. Jenney. The opinion of the Hon. Ralph E. Jenney interpreting the scope of plaintiffs' said patent, and holding that as so interpreted the patent was valid but not infringed, was filed on June 14, 1941 [Tr. 18] and amended by minute order June 24, 1941 [Tr. 36]. The opinion is reported at 39 Fed. Supp. 838, 50 U. S. P. Q. 101. Findings of fact and conclusions of law were made under date of July 8, 1941 [Tr. 37]. Judgment for the defendants, from which this appeal is taken, was entered on July 9, 1941 [Tr. 45]. Notice of appeal was duly filed October 8, 1941 [Tr. 47].

The Patent in Suit.

1. BRIEF HISTORY OF THE METAL SPRAYING ART.

The patent in suit relates to a Metal Spray Gun. It has long been known that metal in the form of wire or powder could be heated to the melting point and sprayed upon any desired object. The metal spraying art underwent some development during the last World War, but it was not until 1920 that the process came into wide use. Contemporaneous with plaintiffs' invention, the art began to assume great commercial importance and continues to grow in popularity.

Before describing the various novel features and functions of plaintiffs' patented spray gun, it might be helpful to describe generally the process of spraying molten metal. The metal, usually in the form of a wire, is reduced to a molten state by means of acetylene gas and oxygen. The molten metal is then subjected to a blast or strong draft of air which tends to atomize the metal and direct it against the materials to be treated. The molten metal is fed in a continuous stream through the nozzle of the gun and is there seized upon by the air blast which, of course, is delivered separately from the gas and oxygen. The atoms or particles of the molten metal are microscopic in size after leaving the nozzle of the gun and in the molten state when they impinge upon the surface to be sprayed. The article which is to be treated is preferably roughened so that the molten metal may readily adhere thereto. The nozzle velocity of the spray gun is approximately 40,000 feet per minute. It is the combination of fast melting and properly synchronized feeding of the metal into the nozzle of the gun, together with the continuous blast of air, which assures a satisfactory process.

There is a wide range of uses and applications for the employment of the process. One of the most important commercial uses is the reclaiming of bearings and bushings in large motors.

There were various types of spray guns available prior to the invention of the patent in suit. Those guns possessed certain inherent defects and limitations. With them it was possible to spray molten metal, but no completely satisfactory use could be made of them, and likewise their use entailed certain hazards and dangers of explosion and backfire. That is repeatedly conceded by defendants' own witnesses. The metal spray gun invented by plaintiffs has solved many problems such as the factors of safety, light weight, ease and efficiency of operation, balance, and the facile and speedy replacement of parts which may have become damaged. It was the first gun designed so that all moving parts, such as ballbearings, worms, gears and shafts, run in a bath of suitable lubricant.

2. DESCRIPTION OF THE PATENTED DEVICE.

The various parts and features of plaintiffs' spray gun are amply described, set forth and claimed in the patent in suit. Further and detailed amplification of that description was rendered by Mr. Charles L. Stokes, plaintiffs' expert witness, at pages 302 *et seq.* of the transcript. Briefly, the patented gun and for that matter defendants' device as well, consists of two principal parts, which may be described as follows:

1. *Power Unit*, including the wire feeding mechanism, and
2. *Combustion Unit*.

The power unit and the combustion unit are releasably associated together at an abutment between the nozzle base of the combustion unit and the walls of the power unit casting.

One of the most important novel features of plaintiffs' patented device is the location of knurled wheels which deliver the wire, in an open channel between the wall of the turbine housing and the adjacent wall of the transmission housing.

The prior art is completely devoid of such features and assembly and teaches only the location of gears and turbine associated together in a box or ordinary casting, together with the wire feeding mechanism. In that type of construction, a backfire or explosion would obviously endanger the operator of the gun and would tend to destroy or damage the entire device.

In plaintiffs' gun, a fine balance is attained as aforesaid by locating a turbine housing on one side and a transmission housing on the opposite side, with a wire feeding mechanism located in the open channel between those two housings. In other words, the combustion unit is formed as a separate and distinct entity from the power unit, and should damage occur to it, a replacement thereof could be made at relatively little expense.

Another novel feature of plaintiffs' structure is the arrangement whereby any desired pressure may be exerted on the wire as it is fed through the wire feeding wheels. Slippage of the wire is thereby prevented.

Still another novel feature is the provision of a hinged latch construction whereby the top wire feeding wheel is releasably confined so that when in use it can be set to engaged the wire and thereafter be unlatched and lifted on its hinged connection.

It may be further noted that in the patented gun and in defendants' device there is a visible feeding of the wire. The open channel provided between the turbine housing and the transmission gear housing constitutes a definite and positive safety factor. If there is a backfire it will be dissipated in the air. The operator may also see the wire as it passes through the gun and thereby knows whether or not it is feeding properly. If for any reason the feeding should be impaired or should stop, the operator may immediately adjust the wire feed without shutting off the gun.

3. CLAIMS OF THE PATENT RELIED ON.

The claims in suit read as follows:

"2. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears, and wire feeding wheels, said member including housings for said turbine and gears and an open channel in its walls exteriorly of said housings, said wheels being adapted for rotation in said channel, a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having control valves and a nozzle base, a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the com-

bustion unit, and means including an abutment between the nozzle base and the walls of said member for releasably confining said units in operative association whereby said wire feeding wheels are visibly disposed in said channel.

3. In a metal spray gun, a power unit comprising a member adapted to carry a turbine, transmission gears and a pair of wire feeding wheels, said member providing housings for said turbine and gears and having an open channel in its walls between said housings, one of said wire feeding wheels being mounted on a shaft extending from the transmission gears beyond the housing thereof and adapted to rotate in said channel, the other of said wire feeding wheels being pivotally mounted on said member and adapted for rotation in said channel, and means for holding the said wire feeding wheels in cooperative engagement during the feeding of wire.

4. A wire feeding mechanism for a metal spray gun comprising a member having a turbine, transmission gears, and a pair of wire feeding wheels, means for effecting the visible feed of wire through said wheels comprising: an open channel in the walls of said member between the turbine and gear housings thereof, a wire feeding wheel mounted between the sides of said channel and actuated by said transmission gears, a wire feeding wheel hingedly mounted on said member and adapted for rotation in said channel, and a spring latch for holding said hingedly mounted wire feeding wheel in engagement with said first wire feeding wheel during the feeding of wire."

4. COMMERCIAL SUCCESS.

Commercial success of the patented device has been established. Reference may be had to the testimony of Mr. Jesse C. Martin, Jr. [Tr. 353 *et seq.*] wherein he states that approximately 150 spray guns embodying the features of the patent in suit have been manufactured and sold to a great number of companies such as the Shell Oil Company, the Reading Railroad Company, the Aluminum Company of America, Detroit Edison Company, and others. The sales price of each gun was \$500.00.

It does not appear how many Mogul (trade name of the alleged infringing device) guns said to incorporate the features of the patented invention, defendants have sold to date. In one of the defendants' advertisements (Plaintiffs' Exhibit 10d), which bears the date of June and July of 1938, the Mogul device was referred to as the gun that was keeping 1500 plants busy. Mr. Boyden, one of the defendants, denied that 1500 Moguls had been sold but did admit that the number was quite substantial [Tr. 103]. The sales price of the Mogul gun was likewise \$500.00 [Tr. 132]. In that respect, it should be noted Mr. Boyden testified [Tr. 132] that the price of the defendants' old Metallizer gun which does not embody the patented invention, was \$250.00 or \$350.00. This is tantamount to saying that the Mogul gun is a vast improvement over the Metallizer, which Mr. Boyden admitted in substance on the witness stand, and the defendants' own advertising further substantiates.

The Defendants' Device.

1. HISTORY OF THE METALLIZER AND MOGUL SPRAY GUNS.

Prior to the invention of the patent in suit defendants manufactured what is known as the Metallizer gun (Plaintiffs' Exhibit No. 6). The defendant company was then known as the Metallizing Company of Los Angeles, and in 1932 became known as the Metallizing Company of America. Mr. Charles Boyden, a mechanical engineer by profession and Vice-President of the defendant company, testified at length [Tr. 106-115] regarding the features of the Metallizer gun, and in doing so admitted that it had certain inherent defects and limited functions; and that the Mogul gun (Plaintiffs' Exhibit No. 8) which was manufactured by defendant company after defendants had knowledge of the patented invention, was a much superior mechanism. The publication known as The Metallizer (Plaintiffs' Exhibits 10a-10d), Mr. Boyden states, could be considered as a house organ of the defendant company, and same repeatedly points out the superiority of the Mogul over the Metallizer.

No contention has ever been made that the Metallizer gun manufactured by defendants is an infringement of the patent in suit. In that structure, the gears and wire feed wheels were all contained in a type of box housing. Any backfire would destroy the gas and oxygen passages in the forward wall of the casting and render the gun totally unuseable. In addition, the fines from the wire would become dispersed in the interior of the housing and many of them would undoubtedly accumulate on the gears and would impair or retard the action thereof. Should the fuel

gas accumulate in the pocket in the lower part of the box, followed by a backfire, a destructive explosion would result.

2. DESCRIPTION OF THE ALLEGED INFRINGING MOGUL SPRAY GUN.

The defendants' Mogul gun (charged to infringe) is a substantial replica of the device of the patent in suit.

It generally comprises (1) a power unit including a wire feeding unit, and (2) a combustion unit. The defendants have repeatedly stressed the point in their advertising that the combustion unit is separate and distinct from the power unit, and that is one of the essential features of the patent in suit. The lower wire feeding wheel in the Mogul gun occupies the identical relationship that it does in the patent. The upper wire wheel operates in an open channel such as the patent discloses and the wire feeding is visible to the operator, which same advantage is derivable from use of the patented gun. In case of backfire, the open channel will permit the safe dissipation of the accumulated gases. In case of damage to the combustion unit, as in the patented structure, that unit may be removed and repaired or replaced at relatively slight expense, when compared with the repair or replacement of the entire gun, which would ordinarily be necessary in the case of damage to the Metallizer and to the spray guns of the prior art.

Mr. Boyden claims to have designed the Mogul gun [Tr. 106-115] and he thereafter admits, feature by feature and part by part, what amounts to complete physical and functional identity between the Mogul gun and the patented device. We shall more explicitly point out the nature of those admissions when we discuss hereinafter the subject of infringement.

The Question Involved.

The sole primary question on this appeal is whether the defendants' Mogul gun infringes claims 2, 3 and 4 of plaintiffs' U. S. Patent No. 2,096,119.

This question is raised on this appeal by reason of the trial court's judgment, supporting opinion and findings of fact and conclusions of law, wherein the patent was held valid but not infringed.

Subsidiary questions are presented in our specification of errors.

In the trial court the defendants contended, among other things, that there was a constructive abandonment of plaintiffs' invention prior to the application for patent. This issue was decided against the defendants and in favor of the plaintiffs [Tr. 22-25] by the court's opinion, and was not referred to in the findings of fact, conclusions of law, or judgment. The defendants took no cross-appeal, and the issue is therefore not involved in this appeal. Nevertheless, defendants caused a large amount of testimony to be printed which related solely to such issue, and which was unnecessary.

Specification of Errors Relied Upon.

I.

The District Court erred in giving judgment for the defendants, dismissing the complaint with prejudice with costs to the defendants.

II.

The District Court erred in not giving judgment for the plaintiffs as prayed for in the complaint.

III.

The District Court erred in narrowly construing the claims in suit of the patent and in finding such claims as so construed not to be infringed.

IV.

The District Court erred in its finding of fact (not numbered) that defendants' gun does not have an "open channel" or the "visibility" to the operator which plaintiffs' patented gun has.

V.

The District Court erred in its finding of fact (not numbered) that in the Mogul gun during operation only the outer end of the rear wire guide can be seen as it projects out of the body, that from the left hand, the side of the gear wheel attached to the upper feed wheel is visible, but it is hardly possible to see either the feed wheel itself or the moving wire, that it would be impracticable to attempt such an observation during operation, and that the feeding is not visible from the right hand side and it would be impossible to operate the gun and at the same time peer down from the top or front to see the wire passing into the combustion chamber.

VI.

The District Court erred in its findings of fact (not numbered) and its conclusions of law (not numbered) that to construe plaintiffs' patent claims as readable on defendants' device would be to give them a construction which would render the claims invalid on the prior art.

VII.

The District Court erred in its interpretation of the prior art patents and in its application of said prior art in the construction of the claims in suit of the patent.

VIII.

The District Court erred in not construing the claims in suit of the patent as valid when construed sufficiently broad to be infringed by defendants' device.

IX.

The District Court erred in not finding that the plaintiffs' patent in suit, as to the claims relied upon, to-wit, 2, 3, and 4, is infringed by defendants' device.

Summary of Argument.

Claims 2, 3 and 4 of the patent in suit are infringed by the defendants' Mogul gun.

1. An analysis of the elements of the claims compared with the prior art and construed with reference to the file wrapper discloses that the patent is entitled to a reasonable range of equivalents.

2. All elements of the claims are duplicated in the Mogul gun in the same relationship, and infringe the claims even when a narrow range of equivalents is accorded them.

3. Defendant Charles Boyden, vice president of the defendant corporation, and the designer of the Mogul gun, admitted that the Mogul gun embodies the novel features protected by the patent.

ARGUMENT.

POINT 1.

An Analysis of the Elements of the Claims Compared With the Prior Art and Construed With Reference to the File Wrapper Discloses That the Patent Is Entitled to a Reasonable Range of Equivalents.

SUMMARY OF PRIOR ART PATENTS:

One of the earliest applications of the art of spraying metals or other fusible substances is found in U. S. patent 1,128,175 issued February 9, 1915, to Erika Morf, a citizen of Switzerland [Def. Ex. J., Tr. 482-585]. Morf discloses merely the fundamental process of fusing and atomizing by a blast of air. No other details of structures are disclosed.

Morf was followed by British patent 268,431 issued to Metallization Limited in 1926 [Def. Ex. F, Tr. 460-462]. This is perhaps the first example of a metal spraying gun employing the principles disclosed by Morf which will operate with the use of wire or a solid rod. The patent discloses a metal spraying gun with a nozzle comprising concentrically disposed jets mounted by means of a union fitting on a housing, enclosing a set of wire feeding wheels. One of said wheels is adjustably mounted. The wire feeds through the housing and said wire feeding wheels. The power for driving said wheels is supplied by an air turbine disposed in a separate housing connected by means of a shaft and a set of transmission gears.

Next in time was patent 1,617,166 issued to Max Ulrich Schoop, a citizen of Switzerland on February 28, 1927 [Def. Ex. I, Tr. 478-480]. Following the general prin-

ciples disclosed by Morf, Schoop discloses a device for atomizing granulated material. It will be noted that Schoop is limited to the application of previously granulated or powdered material. It cannot be used on wire or glass rods. The only element disclosed by Schoop that is also contained in plaintiffs' gun is a nozzle comprising a series of concentrically disposed jets mounted by means of a union fitting. Since this feature is not claimed by plaintiffs as novel, it is of no practical importance here.

Schoop was followed by French Patent No. 639,039, issued to Societe Nouvelle de Metallisation, June 9, 1928 [Def. Ex. D, Tr. 450-456]. The patent declares it to be an improvement on and applicable to the "Schoop" gun. This patent discloses a spray gun designed to operate with solid ammunition in the form of wire or rods. It incorporates a nozzle comprising concentrically disposed jets and a housing, containing the wire feeding mechanism. The wire feeding mechanism comprises a set of oscillating jaws or a rotating screw operated by compressed air. The wire feeds through a closed housing.

A further improvement upon the "Schoop" gun is contained in French Patent No. 680,554, issued to Societe Nouvelle de Metallisation, May 2, 1930 [Def. Ex. C, Tr. 443-447]. This patent discloses an air driven turbine geared to a pair of knurled wire feeding wheels. The gun is entirely enclosed by a housing but provides the first example of a partition between the wire feeding wheels and the transmission wheels. One of the feed wheels is adjustably pivoted.

U. S. Patent 1,776,632 issued to Rudolph Lensch and Paul Leder, Sept. 23, 1930 [Def. Ex. L, Tr. 491] discloses the detailed construction of a metalizing gun of the

closed box type. A pair of wire feeding wheels within the closed box are driven by an air turbine, through the medium of a set of transmission gears. No novelty or advancement over the prior art is claimed for the construction of the gun. The novelty and claims are directed to the details of the combustion nozzle only.

The next step in the improvement of the art appears in French Patent 741,740 issued to Porchere and Jourde, Feb. 18, 1933 [Def. Ex. B, Tr. 430-440]. This gun is similar to French Patent No. 680,554 in that the gun is entirely enclosed by a housing and having a pair of wire feeding wheels, one of which is adjustably mounted. The wire feeding wheels are driven by a set of transmission gears. However, this patent introduces an electric motor as the driving mechanism in place of an air turbine.

U. S. Patent 1,917,523 issued to Andrew D. Irons, July, 1933, discloses a closed box type of gun having a turbine drive, transmission gears, and wire feeding wheels, one of which is pivotably mounted for adjustment. The patentable novelty of Irons lies only in the construction of the combustion nozzle. Since the construction of the nozzle is not included as a part of claims 2, 3 and 4 of plaintiffs' patent, a discussion of it here would be idle.

British Patent No. 440,248 issued to Heinrich Schlupmann Dec. 23, 1935 [Def. Ex. E, Tr. 458] discloses a closed box, electric motor driven metal spray gun. The novelty of Schlupmann lies in the fact that he provides an offset rotating nozzle for spraying the interior of hollow objects. The wire is fed through the closed housing.

The first example of a visible feed is to be found in U. S. Patent 1,987,016 issued to Rudolph Lensch and Paul Leder, Jan. 8, 1935 [Def. Ex. K, Tr. 488]. This

patent discloses and claims a metal spray gun comprising a combustion nozzle, a housing with an air driven turbine and transmission gears disposed within said housing, a pair of wire feeding wheels disposed on shafts extending externally of the housing and being fully visible during operation. One of the wire feeding wheels is pivotally mounted. It will be noted that the turbine and gear housings are on the same side of the gun, resulting in a gun which is off balance. There is no channel between the two housings.

The last step in development of spray guns, prior to the patented gun of the plaintiffs, is to be found in U. S. Patent 2,102,395 issued to Thomas S. Valentine and Edward J. Brennon, Dec. 14, 1937 [Def. Ex. G, Tr. 464]. Valentine *et al.* discloses a closed box type of metal spray gun, introducing an improved combustion nozzle and an external or distant power drive.

The scope to be accorded plaintiffs' claims will now be seen from the following analysis:

COMPARISON OF ELEMENTS IN PATENT CLAIMS WITH
DISCLOSURES IN PRIOR ART:

Patent Claims Subdivided	An Element Meeting Language of a Phase of the Claim First Disclosed by
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Claim 2. In a metal spray gun

(1) A Power unit comprising a member adapted to carry a turbine, transmission gears and wire feeding wheels, said member including	British Patent 268,431 Exhibit F
--	----------------------------------

Patent Claims Subdivided	An Element Meeting Language of a Phase of the Claim First Disclosed by
(a) a housing for said turbine gears and	British Patent 268,431 Exhibit F
(b) an open channel in its walls exteriorly of said housing, said wheels being adapted for rotation in said channel,	None
(2) A combustion unit comprising a member adapted to carry combustible gases and compressed air, and having	British Patent 268,431 Exhibit F
(c) control valves	Schoop 1,617,166 Exhibit I
(d) a nozzle	Morf 1,128,175 Exhibit J
(e) a metal spraying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit, and	Morf 1,128,175 Exhibit J
(f) means including an abutment between the nozzle base and wall of said member for releasably confining said units in operative association whereby	None
(g) said wire feeding wheels are visibly disposed in said channel.	None

Patent Claims Subdivided	An Element Meeting Language of a Phase of the Claim First Disclosed by
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Claim 3. In a Metal Spray Gun

- | | |
|--|--|
| (1) A power unit comprising a member adapted to carry a turbine, transmission gears and a pair of wire feeding wheels, said member providing | British Patent 268,431 Exhibit F |
| (a) a housing for said turbine and gears having | British Patent 268,431 Exhibit F |
| (b) an open channel in its walls between said housings | None |
| (c) One of said wire feeding wheels being mounted on a shaft extending from the transmission gears beyond the housing thereof and | Lensch <i>et al.</i> 1,776,631 Exhibit L |
| (d) adapted to rotate in said channel, | None |
| (e) the other of said wire feeding wheels being pivotally mounted on said member and | British Patent 268,431 Exhibit F |
| (f) adapted for rotation in said channel, and | None |
| (g) means for holding the said wire feeding wheels in cooperative engagement during the feeding of wire. | British Patent 268,431 Exhibit F |

Patent Claims Subdivided	An Element Meeting Language of a Phase of the Claim First Disclosed by
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Claim 4. A wire feeding mechanism for a metal spray gun, comprising

(1) a member having a turbine, transmission gears, and a pair of wire feeding wheels comprising:	British Patent 268,431 Exhibit F
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(a) an open channel in the walls of said member between the turbine and gear housing thereof	None
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(b) a wire feeding wheel mounted between the sides of said channel and	None
--	------

(c) actuated by said transmission gears.	British Patent 268,431 Exhibit F
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(d) a wire feeding wheel hingedly mounted on said member and adapted for	British Patent 268,431 Exhibit F
--	----------------------------------

(e) rotation in said channel, and	None
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(f) a spring latch for holding said hingedly mounted wire feeding wheel during the feeding of the wire.	Lensch <i>et al.</i> 1,776,631 Exhibit L
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The foregoing table of comparison is useful in obtaining a general idea of the novelty contributed by the patent in suit over representative prior art. Since, however, the patent claims cover combinations, and the combinations are nowhere found in the prior art, the claims are to be construed even somewhat broader than this comparative table indicates, because the separated elements which appear by their language to read on prior patents are actually modified by the particulars defining novelty. Therefore, a complete picture of the scope of the patent, is correctly seen from a summary of the combination as a whole, which follows:

SUMMATION OF NOVEL COMBINATION IN PLAINTIFFS'
PATENT:

In summation, plaintiffs' expert witness, Mr. Stokes, discusses [Tr. 341 *et seq.*] part by part the features of the patent in suit which, in combination, he finds to be novel over all of the prior art disclosures. He enumerates the parts and features as follows: The casing of the power unit comprises a gear train housing on one side and a turbine housing on the other side, between which is an open channel for the wire feeding wheels. In the front is a combustion unit carrying air and gas passages. The combustion unit is readily detachable from the power unit and is adapted to fit on a shoulder [abutment] towards the front of the power unit so that wire being fed through same will be fed on a straight line which passes through

the open channel between the walls of the turbine housing and the gear housings and rear wire feeding wheels rotatably disposed in the said channel. The upper wire feeding wheel is pivotally mounted on the upper part of the power unit and adjustably held under tension during operation of the gun so as to hold it in tension with the wire being driven forward by the lower wheel. The open channel functions to dissipate any backfire in the open air and extends through the power unit. The open channel likewise prevents the collection of dust and fines and thereby eliminates any undue wear of the wire feeding wheels or other gears.

In discussing the above novel features of the mechanism of the patent in suit, and anent infringement, the witness emphatically stated that all of such features were present in the defendants' structure.

THE FILE WRAPPER:

Plaintiffs do not differ with the District Judge's analysis of the limitation of an **open channel** imposed by the file wrapper, but contend that his application of the limitation found therein to the defendants' gun was more restricted than a reasonable range of equivalents should allow.

Irons No. 1,917,523 (Ex. H), one of the file wrapper references cited, and indeed all box type spray guns, of necessity embody a channel or passageway for the passage of the wire.

It is conceded that when plaintiffs cancelled their original claim as being anticipated by Irons, and submitted new claims wherein they claimed an *open* channel between the adjacent walls of the turbine and transmission housings, plaintiffs limited themselves to such a channel. It is respectfully submitted, however, that limiting the claims to an open channel between the walls of the turbine and transmission housings, does not and should not restrict plaintiffs to the precise degree of visibility that is displayed in plaintiffs' gun. Plaintiffs are entitled to a reasonable range of equivalents based on the language of the claims, and permitted by the prior art. Claim 3 does not even mention visibility, and claims 2 and 4 do not define the *degree* of visibility.

Within a reasonable range of equivalents, plaintiffs contend the defendants' gun embodies an open channel between the adjacent walls of the turbine and transmission housings, as discussed in more detail in the next section of this brief.

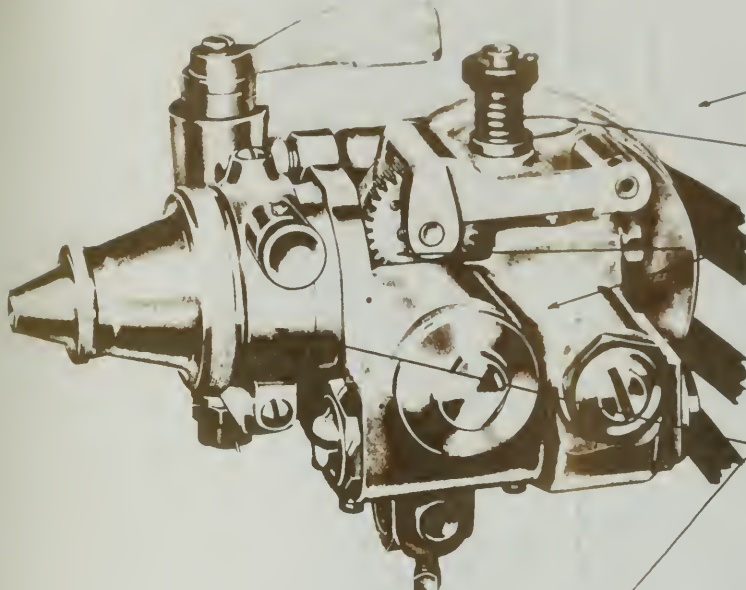
POINT 2.

All Elements of the Claims Are Duplicated in the Mogul Gun in the Same Relationship, and Infringe the Claims Even When a Narrow Range of Equivalents Is Accorded Them.

The best exposition of this is found in the illustrations which are inserted here in our brief. The patent claims are subdivided in the same manner as when comparing them with the prior art, and arrows are drawn from such elements to the corresponding element in the Mogul gun. These illustrations are believed to be much more helpful to this Court than a descriptive comparison, and our case stands on the conclusions to be drawn therefrom.

(Photostats.)

Is a metal device, and,



(1) a power unit comprising a member adapted to carry a turbine, transmission gears, and wire feeding wheels, said member including

(a) housings for said turbine and gears and

(b) an open channel in its walls exteriorly of said housings, said wheels being adapted for rotation in said channel,

(2) a combustion unit comprising a member adapted to carry combustible gases and compressed air, and having

(c) control valves and

(d) a nozzle base,

(e) a metal carrying nozzle secured to said base and adapted to receive the gases and compressed air of the combustion unit, and

(f) means including an abutment between the nozzle base and the walls of said member for releasably confining said unit in operative association whereby said wire feeding wheels are visibly disposed in said channel.

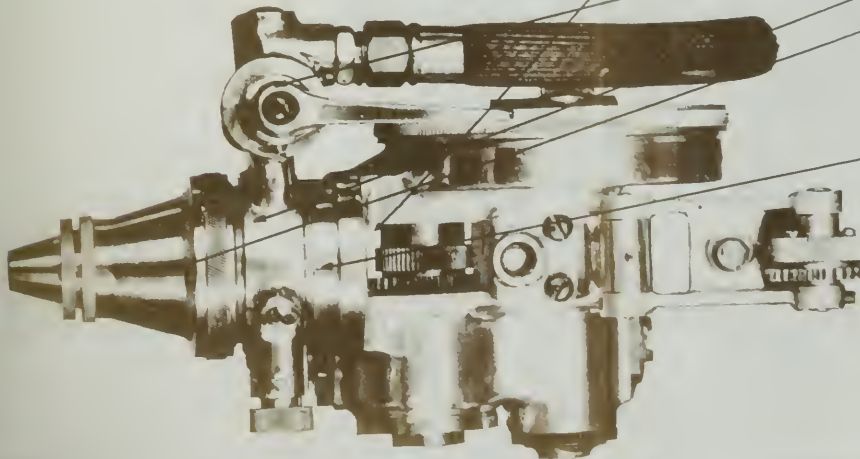
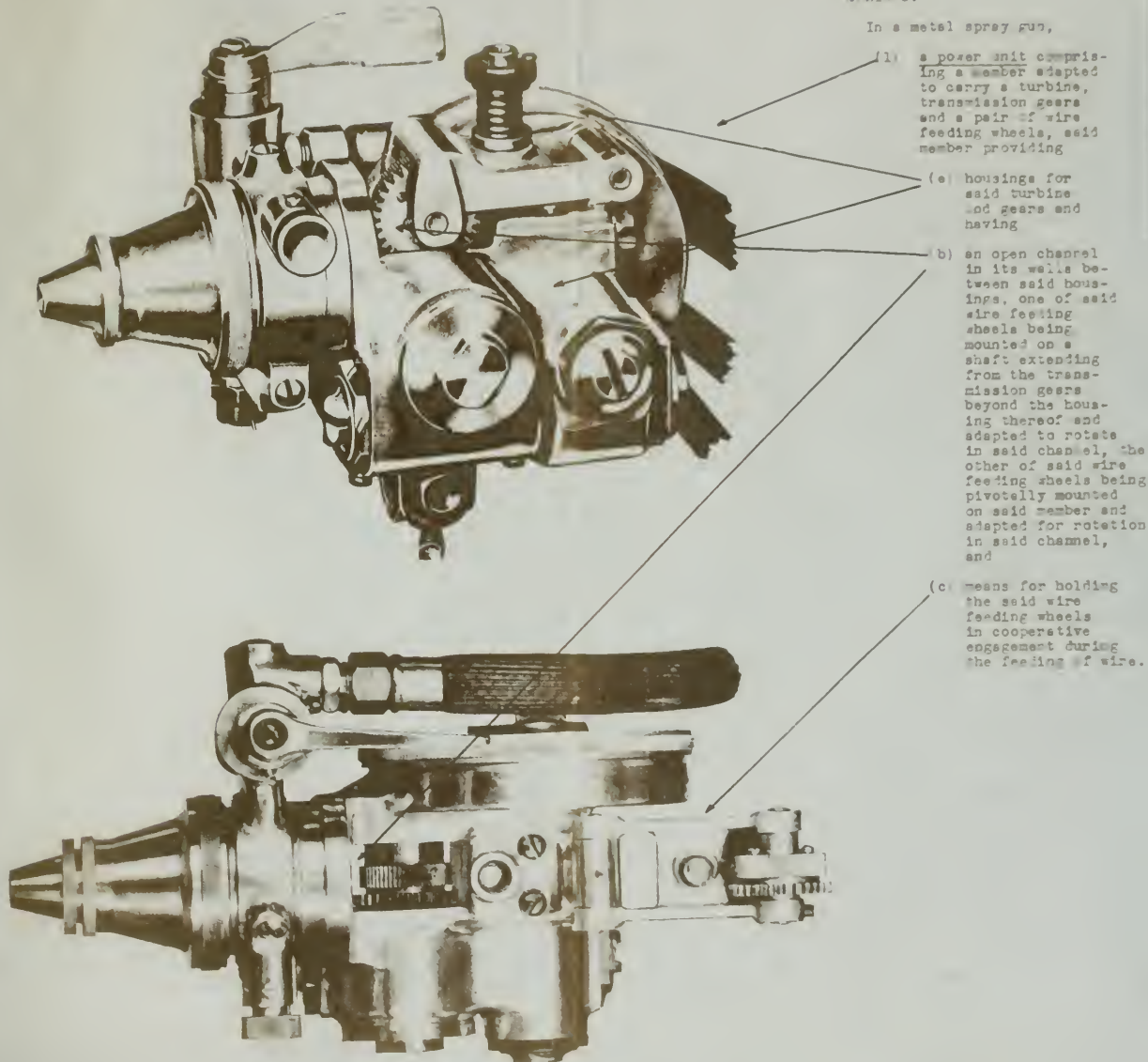




FIGURE 3.

In a metal spray gun,





CLAIM 4.

A wire feeding mechanism for a metal spray gun, comprising

(1) a member having a turbine, transmission gears, and a pair of wire feeding wheels,

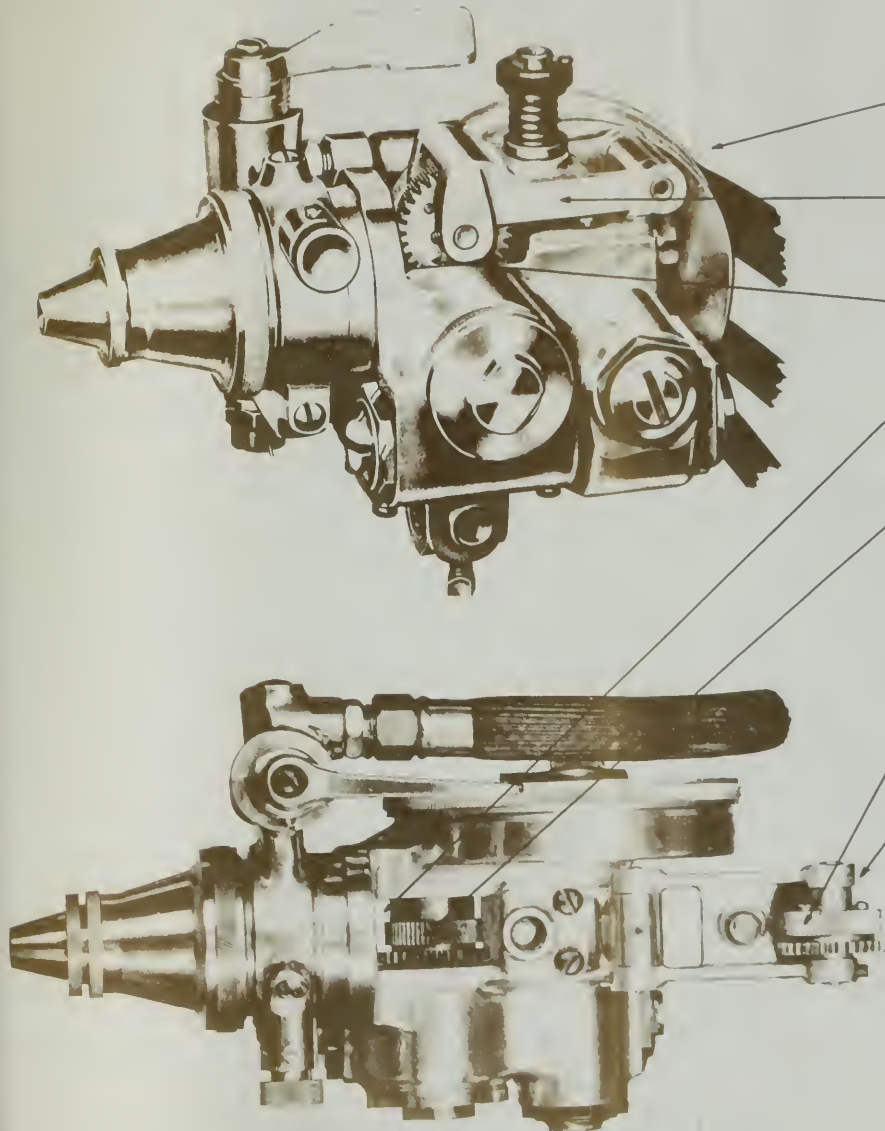
(2) means for effecting the visible feed of wire through said wheels comprising:

(1) an open channel in the walls of said member between the turbine and gear housings thereof,

(2) a wire feeding wheel mounted between the sides of said channel and actuated by said transmission gears,

a wire feeding wheel hingedly mounted on said member and adapted for rotation in said channel, and

(4) a spring latch for holding said hinged wire feeding wheel in engagement with said first wire feeding wheel during the feeding of wire.





POINT 3.

Defendant Charles Boyden, Vice President of the Defendant Corporation, and the Designer of the Mogul Gun, Admitted That the Mogul Gun Embodies the Novel Features Protected by the Patent.

This case affords a striking example of deliberate piracy. Defendants carefully studied plaintiffs' invention and thereafter changed the design of the metallizing gun previously manufactured by them and incorporated each and every feature of plaintiffs' invention.

Such a claim is not based alone on the conclusion of plaintiffs but upon a direct and unequivocal admission by Mr. Boyden, the designer of the accused gun and vice president of defendant corporation.

Mr. Charles Boyden under examination by plaintiffs' counsel made statement after statement which, when considered together, amount to nothing less than a complete and unequivocal admission of infringement. In the first place, he plainly stated that the Metallizer gun manufactured by defendants possessed certain inherent defects which were overcome by the Mogul gun which was designed and constructed approximately four years after manufacture was begun of the Metallizer. At page 125 *et seq.* of the transcript, Mr. Boyden speaks of the deficiencies of the Metallizer gun and the superior qualities of the Mogul mechanism. Briefly, the superior features may be enumerated as follows: The operation is speedier or, in other words, the Mogul sprays more metal in a given time. The Mogul is more durable [Tr. 128]. There is the advantage of segregating the wire feeding wheels so that the fines do not foul the gears. There is the advantage of the open channel [Tr. 128], the separation of

the combustion and power units or, as referred to in the Metallizer Midwinter Issue for January, 1936, the

“complete separation of the gas head and wire feeding mechanism is an assurance against combustible gas mixtures working back into the enclosed gear case through gas mixing channels drilled in the gear case proper.” [Tr. 130; Plf. Ex. 10a, Tr. 77.]

Less expensive replacement cost, better combination of metals, elimination of backfire hazard or gas accumulation [Tr. 130], elimination of explosion because of leakage by reason of the open channel which would permit the fire to dissipate in the air [Tr. 130].

Mr. George Stanley Udell, one of plaintiffs' witnesses, corroborated Mr. Boyden in part on the various advantages attained by the Mogul mechanism over the earlier Metallizer [Tr. 137-139].

During the four year interval between the manufacture of the Metallizer and the Mogul guns, defendants had available and made a close study of plaintiffs' invention which materialized in the patent in suit. That is plainly admitted by Mr. Boyden from whose testimony we quote as follows [Tr. 211]:

“Q. By Mr. Huebner: I believe you testified on direct examination Mr. Boyden, that you knew of the Lensch and Leder patented gun before you designed the Mogul, and that you had seen circulars of the gun? A. That is true.”

The witness then strangely denied receiving any help from those “circulars,” although he admitted looking at the “circulars” [Tr. 213] and also again when he stated:

“A. We no doubt studied the circulars. We studied all competitive equipment circulars.

Q. Didn't you study the plaintiffs' circulars of the patented gun very closely in order to gain knowledge or information from them as to the construction of the gun? A. **I no doubt did, as to the construction of the gun.**" [Tr. 213.] (Emphasis ours.)

It is true that the witness immediately followed that admission by stating he obtained no ideas from the circulars, but that is discounted by the facts in this case which clearly show that the Metallizer gun previously manufactured by defendants was of a construction different from that of the teachings of the patent in suit, while the Mogul gun adopted some four years later and after a disclosure to defendants by means of plaintiffs' circulars had been made, *incorporated part by part and feature by feature the construction of plaintiffs' invention.*

Under direct examination of plaintiffs' counsel, Mr. Boyden in effect admitted complete and unequivocal infringement of the patent in suit and in doing so bound not only himself but the Metallizing Company of America and the other defendants as well, on the basis that he gave practically all of his attention to mechanical problems of the company and "designed" the Mogul gun in question [Tr. 106].

Mr. Boyden pays tribute to plaintiffs' patented invention by repeatedly admitting that the Mogul gun which embodies the same structural details as disclosed in the patent in suit possessed superior qualities to previous spray guns, including the Metallizer. He says that it is impossible for gas to accumulate in the gear case and that no backfire will occur [Tr. 101].

The witness admits that the so-called gas head assembly of the Mogul gun could properly be designated the com-

bustion unit and that the wire feeding assembly might be called the power unit. *Likewise, that the Mogul gun possesses an opening or channel between the two housings which communicates with the atmosphere and that the wire feeding wheels operate in said channel.* Further, that said wire feeding wheels are aligned with a wire guide for directing and propelling wire through the gun and into the nozzle for further operation. That melting occurs in the nozzle of the gun and the molten metal is atomized and blasted by means of air pressure; that the upper wire wheel in the Mogul gun is mounted on an axis or pivoted arm which may be adjusted as desired [Tr. 107-110]; that the lower wire wheel in the Mogul gun is mounted in the channel and on a continuation of the shaft; that the lower wire wheel is driven by means of power derived from the turbine and communicated through gears on to the shaft of the wheel; that the upper wheel is an idler and tension thereof may be regulated by means of a spring and screw arrangement; that the combustion unit or so-called gas head of the Mogul gun is completely removable from the power unit or so-called wire feeding assembly [Tr. 107-110].

We have in the testimony referred to, an admission of complete infringement, feature by feature, of the patent in suit.

The witness immediately thereafter admitted that he was familiar with the patent in suit and that in answering the questions which we have paraphrased he was aware that plaintiffs' counsel was appropriating language both from the patent in suit and defendants' own advertising literature and using it synonymously and that the gas head assembly and combustion unit and also the power unit and

wire feed assembly nomenclature was used interchangeably [Tr. 111].

Further admissions of the witness in respect to infringement are as follows: He admitted that the defendants' structure and the patented device both operate to spray molten metal; that they use the same kind of wire and that they perform that function by the introduction of wire through a rear wire guide and the ejection of the wire through a forward wire guide. We would direct this Court's attention to the following words of the witness [Tr. 111-112]:

"A. They both work the same.

Q. Maybe you are willing to admit they are identical in construction and in operation and in results? A. I would say the results are the same and they operate very closely the same and in structure there is some difference.

* * * as far as the operation goes, it is exactly the same * * *.

Q. * * * You concede that the patented gun and the Mogul gun operate in exactly the same way?

A. They do.

Q. To produce exactly the same results? A. They do.

Q. And that the structure is just about the same, except that you observe some little differences? A. That is right."

Thereafter, the witness was compelled to retract his previous statement respecting a difference in structure which he had indicated was the arrangement of parts whereby the wire could be seen passing through the feed rolls of plaintiffs' device while in the Mogul gun such was

not the case. When questioned as to any other purported differences in structure, the witness said [Tr. 114]:

“Q. By Mr. Huebner: Is there any other feature that is different? A. Well, just a difference in the arrangement of parts. Outside of that I don’t see any great difference.”

Again speaking of those so-called differences, other than the visibility of the wire, the witness stated [Tr. 115]:

“* * * but that is all matter of design. It don’t amount to anything.

Q. By Mr. Huebner: It is not really a distinction— A. No. This one [the Mogul tensioning member] swings back.

Q. That is one of the details of this part of the combustion unit and this part is not a real distinction, is it? A. No. It is just a matter of we liked it this way, and the other gentlemen liked it that way.”

It is elementary to point out that a rearrangement or reorganization of parts which in the present case is really quite insignificant, cannot and does not avoid infringement where the structure, mode of operation or function, and results remain substantially the same. That is unmistakably true of the cause at bar.

Again the witness refers to what he terms the visibility of the wire in the patented structure and then admitted [Tr. 115]:

“Q. I think you said that aside from that there is no other difference worth noting? A. Nothing of importance.”

We thus come to the point in the case where one of the defendants, vice-president of the defendant company and the self acknowledged designer of the Mogul gun, has plainly and repeatedly admitted that the only possible distinction or difference between the structures is the degree of wire feed visibility. Witness' attention was thereafter directed to a specimen of the Mogul gun (Plaintiffs' Exhibit No. 8) and this colloquy occurred [Tr. 116]:

“Q. If you look in right there, can't you see the wire going into the feed rolls? A. I don't know.

* * * * *

Q. Looking from the left side of the gun, isn't it wholly possible to see the feed wire both at the rear part of the feed roll and the forward part of the feed roll as it is passing through the gun? A. It can be seen at the rear and also the front.

Q. Looking from the side of the gun, from the top of the gun? A. Yes, or from the top of the gun, you see it in front.

Q. And from the side of the gun you can see both the front and rear of the feed rolls, can't you? A. Here, yes.

Q. That is, from the side of the gun? A. Yes, you can see the wire.

Q. Both places? A. Both places.”

The fact is plainly observable by operation or inspection of the patented gun and the Mogul gun, that the wire as it proceeds through the feed rolls *is* visible from the back as well as the front in the former structure, and from the

top and sides in the latter. It is a distinction without a difference and does not at all affect the admitted and plainly self-evident similitude between the two structures as to construction, mode of operation, and results. *The admissions of defendant constitute a full and complete admission of infringement which scarcely leaves that issue open to controversy.* As a matter of fact, the witness did not consider the visibility feature as of any importance. His concession in that regard—strangely enough brought out by his own counsel—is as follows [Tr. 120]:

“Q. Do you consider the visibility feature as of any importance in designing the Mogul machine?

A. No, otherwise I would have opened it up so you could see it.”

If there is any possible doubt about this phase of the case, we would refer this Honorable Court to the testimony of plaintiffs' expert, Charles L. Stokes [Tr. 340 *et seq.*], wherein a full exposition of this matter is made, the conclusion being that no substantial or even colorable difference exists between the patented structure and the Mogul gun. Moreover, the only claims which specify visibility are Claims 2 and 4 which say (terminal portion thereof):

“* * * whereby said wire feeding wheels are visibly disposed in said channel.”

It was pointed out by Mr. Stokes [Tr. 364] that the word used is “visible” and no mention is made of “total visibility” or “partial visibility,” or any other qualification or limitation. Claim 3 does not mention visibility.

DEGREE OF VISIBILITY WAS ERRONOUSLY CONSTRUED AS
CONTROLLING.

We quote from the opinion of the District Court [Tr. 32-33]:

"In plaintiff's gun visibility during operation is always present. The wire feed wheels are visible from the rear, and the righthand side; the construction giving bearings for both ends of the shafts without using the closed box type of body. In the Mogul gun, during operations, only the outer end of the rear wire guide can be seen as it projects out of the body. From the left hand, the side of the gear wheel attached to the upper feed wheel is visible, but it is hardly possible to see either the feed wheel itself or the moving wire. Certainly it would be impractical to attempt such an observation during operations. The feeding is not visible from the righthand side and it would be impossible to operate the gun and at the same time peer down from the top or front and see the wire passing into the combustion chamber."

These conclusions respecting the visibility in the Mogul gun are erroneous. It is possible that such misconception arose from the fact that the judge who decided the case did not hear the evidence, and had no opportunity to see the demonstrations and observe the handling of the gun by the witness.

Defendants' counsel laid much stress upon and built their entire defense of non-infringement around one point, viz., that the wire feeding wheels of the Mogul gun are not as visible from the rear as they are in the plaintiffs' gun, this in the face of Mr. Boyden's admissions that the difference was inconsequential. The District Court ap-

parently accepted this premise, and in such respect committed its primary error.

A moment's reflection will realize the fallacy of such a defense and that, even admitting the truth of such an assertion, the charge of infringement is not avoided.

Defendants by the complaint are charged with infringement of claims 2, 3 and 4 of the patent in suit, not with copying plaintiffs' commercial embodiment of the patented gun. By the evidence it appears that defendants had plaintiffs' commercial gun as a model, and they appropriated all of the essential features, although not extracting the full degree of visibility exemplified by plaintiffs' commercial gun. It is true that this commercial gun follows the details of the patent drawings, and to such extent, but that that extent only, is illustrative of the patent. It does not restrict the claims any more than the patent drawings themselves do. It is merely an example of what the patentees consider to be the best embodiment of the claims.

Claim 2 defines: "wire feeding wheels are visibly disposed in said channel."

Claim 3 makes no mention of "visibility."

Claim 4 defines: "means for effecting the visible feed of wire through said wheels."

Where in any of these claims is there any hint or claim to perfect visibility; or that the visibility specified is limited to visibility from the rear? Nor is any such limitation imposed by the prior art or by the file wrapper.

Defendants make no contention that the wire feed rolls are not of equal visibility from the *top* and *front* of the

accused Mogul gun, as they are in the patented gun. An examination of the Mogul gun will disclose why such a contention was not and could not have been made. The visibility of both guns is the same.

A proper understanding of the purpose and advantages of the "visibility" claimed by the patent reveals that the essence of the "visibility" defined in two of the claims refers to the open space between the feed rolls and the orifice of the combustion nozzle and not the opening leading into the feed rolls from the rear.

All closed box type spray guns were subject to two serious disadvantages. If combustible gas accumulated in the box, an explosion could follow which would wreck the gun and seriously injure the operator. *An open channel* immediately behind the combustion head renders such an explosion impossible. The other serious disadvantage lay in the fact that any irregularities in the surface of the wire would tend to cause the wire to "ball-up" *between the feeding wheels and the combustion head* causing expensive shut downs and delays. To be able to see the wire feed into the rolls is of no substantial importance. Even if the rear view were completely blocked, as it was in the earlier closed box types, so long as the operator sees the wire feeding into the box, he knows the operation of the gun is satisfactory up to and through the wheels—he does not need to actually see the wheels turn. However, the mere fact that the wire is feeding into the gun does not mean that it will continue on through the combustion head; it may "ball up" between the feed wheels and the combustion head. *It is at this point that the importance of visibility lies.* It is much the same as trying to push a piece of thread through the eye of a needle. It

would be folly to watch the thread on the near side of one's finger, rather than watching to make sure the thread did not bend between the fingers and the eye of the needle.

It was upon such argument that the patent in suit was granted. In this light, there can be no doubt that defendants' Mogul (Plf. Ex. 8 embodies the visible feed required to sustain a charge of infringement of claims 2 and 4.

A SECONDARY PATENT IS ENTITLED TO A REASONABLE RANGE OF EQUIVALENTS.

The Supreme Court of the United States and the Circuit Court of Appeals for the Ninth Circuit have repeatedly held that a secondary patent is entitled to a reasonable range of equivalents and that the invention should not be rendered practically worthless by restrictive and artificial rules of interpretation.

The patent should be construed in such a way as to secure to the inventor the fruits of his genius. In the case of the *Portland Telegram et al. v. New England Fibre Blanket Co.*, 38 Fed. (2d) 780 (C. C. A. 9, 1930), Circuit Judge Dietrich, in speaking of a secondary patent states (at page 782):

"Their invention undoubtedly marks a substantial advance in the art, and their patent is to be given a reasonable construction so as to secure to them the reward to which they are entitled."

If the two devices do the same work in substantially the same way, and accomplish substantially the same result, they are "mechanical equivalents."

In the recent Ninth Circuit case of *Wire Tie Machine Co. v. Pacific Box Corporation*, 102 Fed. (2d) 543 (C. C. A. 9, 1939), the Honorable Judge Stevens said:

“As pointed out above, the '260 patent is not limited to a narrow range of equivalents. We think that the Eby machine does do the same work as Parker '260, in substantially the same way, and accomplishes substantially the same result, and therefore can be said to be the equivalent of '260. * * *”

“Parker '260” referred to by Judge Stevens was patent No. 1,875,260 for an improvement in a wire tying machine. The District Court's opinion holding there was no infringement was reversed.

This view of secondary or improvement patents has been concurred in by the Second Circuit, which has held that even though in view of the prior art, a patent is a narrow one, it should not be so limited in equivalents as to render the invention practically worthless.

Art Metal Works v. Abraham & Straus, 107 Fed. (2d) 940 (C. C. A. 2, 1939).

See also:

Klein v. Russel, 19 Wall. (86 U. S.) 433, 22 L. Ed. 116;

Topliff v. Topliff, 145 U. S. 156, 36 L. Ed. 658;

Smith v. Snow, 294 U. S. 1, 79 L. Ed. 72.

A change in degree, or sacrifice of some of the advantages of the patented structure does not avoid infringement.

A SLIGHT AND UNIMPORTANT MODIFICATION WILL NOT
AVOID INFRINGEMENT.

“True, plaintiff’s invention is not primary, but their patent cannot be rendered worthless by a mere evasion of the exact letter thereof through slight and unimportant modifications of the essential elements.”

Bankers’ Utilities Co. v. Pacific Nat’l Bk., 32 Fed.
(2d) 105, 107 (C. C. A. 9, 1929).

Conclusion.

The District Court erred in reading into claim 3 a visibility of the wire feeding wheels, and in holding that claims 2, 3 and 4 must all be limited to a visibility of the degree illustrated by the patent drawings and plaintiffs’ commercial gun, and that, as so construed, the claims are not infringed by the defendants’ Mogul gun.

The prior art does not disclose a metal spray gun having balanced housings for turbine and gears, with a channel between adjacent walls of these housings, and wire feeding wheels operating in the channel, the channel being open for dissipation of gases and wire fines, and permitting inspection of the wire being fed into the combustion head. Nor does the prior art disclose an abutment upon which the combustion head is detachably mounted. These features are described in the claims and are all present in the defendants’ Mogul gun.

Infringement therefor occurred, and the judgment of the trial court should be reversed, with directions to enter

a judgment finding infringement, and ordering an injunction and accounting of damages and profits.

This Court is also requested to make a special allowance to the plaintiffs for costs incurred in printing the unnecessary parts of the record pursuant to defendants' designation.

Respectfully,

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Los Angeles, Calif., March 9, 1942.

